



TANK TYPE Diaphragm	MOUNT Pedestal	LOCATION Apex
This is a 13-inch pressure vessel constructed of 6Al-4V titanium. The tank shell consists of a elliptical pressurant head and a hemispherical head. Positive fuel expulsion is provided by a reversible ethylene-propylene terpolymer (AF-E-332) rubber diaphragm retained (welded in) at the sphere mid-plane. Mounting is accomplished on a pedestal mount located on the apex of the propellant hemisphere.		
ISO 9001 & AS 9100 REGISTERED		

ATK Part Number 80342-1

SIZE: 12.88 inch ID

SIZE: 327- mm

APPLICABLE DOCUMENTS		TANK CHARACTERISTICS			
Acceptance Test Procedure	50-000353	Operating Pressure, psig	480	Total Volume, ci	920
Qualification Test Procedure	50-000354	Proof Pressure, psig	720	Prop Volume, ci	882
Burst Test Report	56-000135	Cryo Proof, psig	NA	Max Design Wt, lbs	6.0
Qualification Test Report	56-000140	Burst Pressure, psig	945	Minimum Wall, inch	0.021
Re-Qual Test Report	56-000146	Actual Burst, psig	1,450		
Fracture Analysis Plan	54-000211				
Cleaning	CPP 3668				

ACCEPTANCE TESTS
Preliminary Inspection and Examination of Product
Volumetric Capacity Test
Proof Pressure Test
Volumetric Expansion and Permanent Set Test
Internal Leakage
External Leakage
Random Vibration
Internal Leakage
External Leakage
Outside Surface Quality Inspection
Weld Quality Inspection
Weight Quality Inspection
Weight Test
Examination of Product
Cleanliness

DIAPHRAGM INFORMATION	
Diaphragm P/N	80-216007-1
Diaphragm Mold Tool No	T-1262
Diaphragm Gross Wt	1.0
Diaphragm Material Type	AF-E-332
Diaphragm, Material Note 2	90-000075
Diaphragm Processing Note 2	90-000087
N-Ray Inspection	1002

TANK CHARACTERISTICS (Metrics)			
Operating Pressure, Bar	33.09	Total Volume, l	15.08
Proof Pressure, Bar	49.64	Prop Volume, l	14.45
Cryo Proof, Bar	NA	Max Design Wt, Kg	2.72
Burst Pressure, Bar	65.15	Minimum Wall, MM	0.533
Actual Burst, Bar	99.97		

Notes:

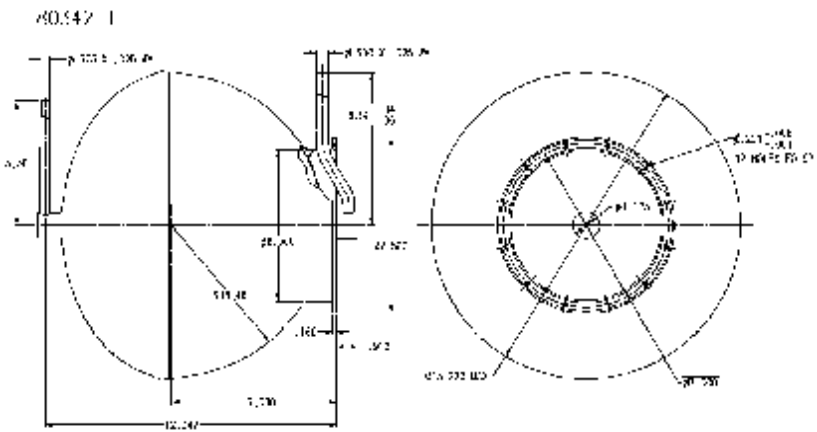
- Majority of this tooling is owned by ATK
- Proprietary Document
- This tank is similar to 80216-1
- Tube protectors are SK 1127 & SK 1128
- DMSP is Defense Meteorological
- TIROS is Television Infrared Observatory Satellite
- General Electric Astro Space
- Fracture Critical

FORGINGS		
FORGINGS P/N	SUPPLIER	Die
80-342061-1, Press		
80-216061-1, Prop		
RING FORGING	RING SIZE, (Rough Machined)	
80-216003-11, Retainer	13.13 +.09 OD x 11.81 -.09 ID x 1.38 +.09 Lg	

QUALIFICATION TESTS
Preliminary Examination of Product
Volumetric Capacity Test
Proof Pressure Test
Volumetric Expansion and Permanent Set Test
Internal Leakage
External Leakage
Random Vibration
Internal Leakage
External Leakage
Outside Surface Quality Inspection
Weld Quality Inspection
Vacuum Integrity
Volumetric Capacity
Proof Pressure Test
Internal Leakage
External Leakage
Random Vibration
Internal Leakage
External Leakage
Cycle Life
Internal Leakage
External Leakage
Outside Surface Quality Inspection
Weld Quality Inspection
Weight Test
Final Examination of Product

TUBE TYPE AND SIZE	
TRANSITION	SIZE
80-342001-1, Inlet	.375 OD x .025 Wall
80-342002-1, Outlet	.500 OD x .025 Wall

TUBE TYPE AND SIZE (Metrics)	
TRANSITION	SIZE
80-342001-1, Inlet	9.25 OD x .635 Wall
80-342002-1, Outlet	12.7 OD x .635 Wall



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